

## Message

**From:** Westlake, Kenneth [westlake.kenneth@epa.gov]  
**Sent:** 5/1/2015 6:53:04 PM  
**To:** Walts, Alan [walts.alan@epa.gov]; Hyde, Tinka [hyde.tinka@epa.gov]; Swenson, Peter [swenson.peter@epa.gov]; Pierard, Kevin [pierard.kevin@epa.gov]; Holst, Linda [holst.linda@epa.gov]  
**CC:** Ambutas, Kestutis [Ambutas.Kestutis@epa.gov]; Kenney, Thomas [kenney.thomas@epa.gov]; Wester, Barbara [wester.barbara@epa.gov]  
**Subject:** FW: Long-Range Hydrology report for Northshore Peter Mitchell Pits  
**Attachments:** Barr 2008LongRangeHydrologyStudy(basin).pdf

FYI.

This is a followup email from Margaret Watkins of the Grand Portage Band transmitting a hydrooogy report from the NorthShore Mine referenced in her 4-30-15 letter to the co-leads regarding NorthMet modeling.

Ken

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**From:** Margaret Watkins [mailto:mwatkins@grandportage.com]  
**Sent:** Friday, May 01, 2015 11:56 AM  
**To:** Westlake, Kenneth; McKim, Krista  
**Subject:** Fwd: Long-Range Hydrology report for Northshore Peter Mitchell Pits

----- Forwarded Message -----

**Subject:** Long-Range Hydrology report for Northshore Peter Mitchell Pits

**Date:** Fri, 01 May 2015 11:50:37 -0500

**From:** Margaret Watkins <mwatkins@grandportage.com>

**To:** Bill Johnson <bill.johnson@state.mn.us>, Jimenez, Michael -FS <mjimenez@fs.fed.us>, Doug Bruner <douglas.w.bruner@usace.army.mil>, Periman, Richard -FS <rperiman@fs.fed.us>, Rye, Marty E -FS <mrye@fs.fed.us>, Johnson, Lee R -FS <leejohnson@fs.fed.us>, Brad Johnson <Brad.A.Johnson@usace.army.mil>, Tamara Cameron <Tamara.E.Cameron@usace.army.mil>, Sedlacek.Michael@epamail.epa.gov <Sedlacek.Michael@epamail.epa.gov>

All:

Please find attached for your convenience a copy of the 2008 Barr document referenced in the letter I sent out yesterday. Please find below the quote included in the letter from page 20 of the document.

"The Partridge River upstream of Colby Lake will experience a drainage area reduction of approximately 7 square miles between current conditions and post-closure conditions. This reduction is located at the headwaters of the river. Reductions in post-closure flows at the Dunka Road crossing are estimated to be as high as forty percent. *Flow reductions in the 4.5 mile reach upstream of Dunka Road will be greater, as the area removed from the watershed represents a greater percentage of the total tributary area. Flows in the Partridge River immediately downstream of the post-closure watershed boundary may be reduced by close to 100 percent relative to current conditions.*"

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Margaret Watkins